**Fig. 1**



Name	DNAzyme Sequenz
hgd1	5'-TCGGTCAGAggctagctacaacgaTGCGTTGCT-3'
hgd2	5'-GGCGTACGAggctagctacaacgaCTGCTCGGT-3'
hgd3	5'-GGCGGCGTAGgctagctacaacgaGACCTGCTC-3'
hgd4	5'-CTCGGGTCAGgctagctacaacgaCTGGGTAGC-3'
hgd5	5'-TCCTCTGCAGgctagctacaacgaCGGGGTCCT-3'
hgd6	5'-ACTCTGCAAggctagctacaacgaTCTGCGAGC-3'
hgd7	5'-GGGCGACGAggctagctacaacgaTCTGCAATT-3'
hgd8	5'-AAGGGGCGAggctagctacaacgaGACTCTGCA-3'
hgd9	5'-AAAACGGGAggctagctacaacgaCAGGTTGTA-3'
hgd10	5'-AGAATAAAAggctagctacaacgaGGGACCAGG-3'
hgd11	5'-ATGGCAGAAggctagctacaacgaAAAACGGGA-3'
hgd12	5'-AACTGGGTAggctagctacaacgaGGCAGAATA-3'
hgd13	5'-ATCCAAAAAggctagctacaacgaTGGGTATGG-3'
hgd14	5'-AGGGGAAGAggctagctacaacgaAAAAATCCA-3'
hgd15	5'-TTTTAAAAAggctagctacaacgaTATCTTGGA-3'
hgd16	5'-GTGGGGGGAggctagctacaacgaGGGAAGGCT-3'
hgd17	5'-GTTGAATGAggctagctacaacgaTTGCTTTCG-3'
hgd18	5'-GTCGTTGAaggctagctacaacgaGATTTGCTT-3'
hgd19	5'-GGCCCCGAaggctagctacaacgaCCGCGCGCG-3'
hgd20	5'-TCACCTCCAaggctagctacaacgaGGCCTCGGC-3'
hgd21	5'-CCGCCGTCaggctagctacaacgaCTCCATGGC-3'
hgd22	5'-GGTGGCTCaggctagctacaacgaCCAGCGCGG-3'
hgd23	5'-CGTTGAGCaggctagctacaacgaGGCGGGGTG-3'
hgd24	5'-CCGCGTCCAaggctagctacaacgaGTAGGAGTG-3'
hgd25	5'-CAGCGGGTAggctagctacaacgaTGCGCCGCG-3'
hgd26	5'-GCACATCCAaggctagctacaacgaCTCCTCCGG-3'
hgd27	5'-AAAAGCACaggctagctacaacgaCCACCTCCT-3'
hgd28	5'-TAAAAAGCaggctagctacaacgaATCCACCTC-3'
hgd29	5'-GACCGTCGaggctagctacaacgaGTTAAAAAG-3'
hgd30	5'-TTGCCTTGaggctagctacaacgaCGTCGATGT-3'
hgd31	5'-AGGGCGGGAggctagctacaacgaGTGGTTGCC-3'
hgd32	5'-TGGCCCTGAggctagctacaacgaCGAGTTTCC-3'
hgd33	5'-ACCTCTGCAggctagctacaacgaCGTGGCCCT-3'
hgd34	5'-CGGAGGGTAggctagctacaacgaCTCTGCACC-3'
hgd35	5'-GGCGGCACAggctagctacaacgaCTGGCTCCC-3'
hgd36	5'-CGGGCGGCaggctagctacaacgaACCTGGCTC-3'
hgd37	5'-AGGGATCCAaggctagctacaacgaGAAGCAGAG-3'
hgd38	5'-GGGTAGGGAggctagctacaacgaCCATGAAGC-3'
hgd39	5'-GGGCTGAGAggctagctacaacgaTCCAGGGGG-3'
hgd40	5'-GTGGATGGAggctagctacaacgaGTCTTGAG-3'
hgd41	5'-CGTGGTGGAggctagctacaacgaGGACGTCTT-3'
hgd42	5'-GGGGGTAGAggctagctacaacgaGGAGAGGGG-3'
hgd43	5'-GGAGGAGGAggctagctacaacgaGAGGCCGGG-3'
hgd44	5'-GCCCCCGAggctagctacaacgaAAGGAGGAG-3'
hgd45	5'-CCGGGGAGAggctagctacaacgaGTCCCTTCGG-3'
hgd46	5'-GGACAGCGAggctagctacaacgaGGGTCCGGG-3'
hgd47	5'-TGGGGTGGAggctagctacaacgaAGCGATGGG-3'
hgd48	5'-CTTGAGGCAggctagctacaacgaTCTTTCTCG-3'
hgd49	5'-CACCTGGTAggctagctacaacgaTTGAGGCAC-3'

**Fig. 3 Cont.**

<b>Name</b>	<b>DNAzyme Sequenz</b>
hgd50	5'-GCAGGGGCaggctagctacaacgaCTGGTACTT-3'
hgd51	5'-CCAGCTTCaggctagctacaacgaGCTGTCGGG-3'
hgd52	5'-GTGGGACGaggctagctacaacgaTCCAGCTTC-3'
hgd53	5'-GGAGTGGGaggctagctacaacgaGACTCCAGC-3'
hgd54	5'-ATGCTGCCAggctagctacaacgaGGGAGTGGG-3'
hgd55	5'-GGGCGGTCaggctagctacaacgaGCTGCCACG-3'
hgd56	5'-GAGGCTCCAggctagctacaacgaCCAGGGCGG-3'
hgd57	5'-GTGGGTTCGaggctagctacaacgaGAGGAGGCT-3'
hgd58	5'-AGGTGGTGAggctagctacaacgaGGGGTGGTG-3'
hgd59	5'-ACTCGGGCaggctagctacaacgaGTAGGGCGG-3'
hgd60	5'-GGAGCTGTAggctagctacaacgaTCGGGCACG-3'
hgd61	5'-GGACTTGCaggctagctacaacgaCCGAAGCCG-3'
hgd62	5'-GGGCCTGGAggctagctacaacgaTTGCATCCG-3'
hgd63	5'-TGTGCTGGAggctagctacaacgaCGGGCCTTG-3'
hgd64	5'-GTTACACAggctagctacaacgaTCCCTGCCT-3'
hgd65	5'-CAGTTCACAggctagctacaacgaACTCCCTGC-3'
hgd66	5'-CACAGTTCaggctagctacaacgaACACTCCCT-3'
hgd67	5'-GTTGCCCCAggctagctacaacgaAGTTCACAC-3'
hgd68	5'-TCGCCGCCAggctagctacaacgaAGTGGGGTC-3'
hgd69	5'-CCCGTGCCAggctagctacaacgaCTCGCCGCC-3'
hgd70	5'-GGCGTTGCaggctagctacaacgaAGGTAGTGT-3'

Fig. 4

## Multiple Sequence Alignments GATA-3

Sequenz_1	1	GGCGCCGTCTTGATAC TTTCAGAAAGAATGCATTCCCTGTAAAAAAAAAAAAAAAAAAGT	60
Sequenz_2	****	-----	****
Sequenz_3	1	GGCGCCGTCTTGATAC TTTCAGAAAGAATGCATTCCCTGTAAAAAAAAAAAAAAAAAAGT	60
Sequenz_1	61	GAAGAGAGAGAGAGAAGAAGAGAGAGAGACGGAGGGAGAGCGAGACAGAGCG	119
Sequenz_2	****	-----	****
Sequenz_3	61	GAAGAGAGAGAGAGAAGAAGAGAGAGAGACGGAGGGAGAGCGAGACAGAGCG	120
Sequenz_1	120	AGCAACGCAATCTGAC CGAGCAGGTCTGACGCCGCCGCTCCTCCTCTCTGCTCTTC	179
Sequenz_2	****	-----	****
Sequenz_3	121	AGCAACGCAATCTGAC CGAGCAGGTCTGACGCCGCCGCTCCTCCTCTCTGCTCTTC	180
Sequenz_1	180	GCTACCCAGGTGACCC GAGGAGGGACTCCGCCCTCCGAGCGGCTGAGGACCCCGGTGCAGA	239
Sequenz_2	****	-----	****
Sequenz_3	181	GCTACCCAGGTGACCC GAGGAGGGACTCCGCCCTCCGAGCGGCTGAGGACCCCGGTGCAGA	240
Sequenz_1	240	GGAGCCTGGCTCGCAG AATTGCAGAGTCGTCGCCCTTTTACAACTGGTCCCGTTTTA	299
Sequenz_2	****	-----	****
Sequenz_3	241	GGAGCCTGGCTCGCAG AATTGCAGAGTCGTCGCCCTTTTACAACTGGTCCCGTTTTA	300
Sequenz_1	300	TTCTGCCATACCCAGT TTTTGGATT TTTGTCTTCCCTTCTTCTCTTTGCTAAACGACCC	359
Sequenz_2	****	-----	****
Sequenz_3	301	TTCTGCCATACCCAGT TTTTGGATT TTTGTCTTCCCTTCTTCTCTTTGCTAAACGACCC	360
Sequenz_1	360	CTCCAAGATAATTTTT AAAAAACCTTCTCCTTTGCTCACCTTTGCTTCCCAGCCTTCCCA	419
Sequenz_2	1	-----TCCCAGCCTTCCCA	14
Sequenz_3	361	CTCCAAGATAATTTTT AAAAAACCTTCTCCTTTGCTCACCTTTGCTTCCCAGCCTTCCCA	420
Sequenz_1	420	TCCCCCACCAGAAAGC AAATCATTTCAACGACCCCGACCTCCGACGGCAGGAGCCCCC	479
Sequenz_2	15	TCCCCCACCAGAAAGC AAATCATTTCAACGACCCCGACCTCCGACGGCAGGAGCCCCC	74
Sequenz_3	421	TCCCCCACCAGAAAGC AAATCATTTCAACGACCCCGACCTCCGACGGCAGGAGCCCCC	480
Sequenz_1	480	GACCTCCCAGGCGGAC CGCCCTTCTCCCGCGGGTTCCGGGCCCGGCGAGAGGGC	539
Sequenz_2	75	GACCTCCCAGGCGGAC CGCCCTTCTCCCGCGGGTTCCGGGCCCGGCGAGAGGGC	133
Sequenz_3	481	GACCTCCCAGGCGGAC CGCCCTTCTCCCGCGGGTTCCGGGCCCGGCGAGAGGGC	540
Sequenz_1	540	GCGAAGACAGCCGAGG CCATGGAGGTGACGGCGGACACCGCGCTGGGTGAGCCACCAC	599
Sequenz_2	134	GCGAAGACAGCCGAGG CCATGGAGGTGACGGCGGACACCGCGCTGGGTGAGCCACCAC	193
Sequenz_3	541	GCGAAGACAGCCGAGG CCATGGAGGTGACGGCGGACACCGCGCTGGGTGAGCCACCAC	600
Sequenz_1	600	CACCCCGCCGTGCTCA ACGGGCAGCACCCGGACACGACACCCCGGCCCTCAGCCACTCC	659
Sequenz_2	194	CACCCCGCCGTGCTCA ACGGGCAGCACCCGGACACGACACCCCGGCCCTCAGCCACTCC	253
Sequenz_3	601	CACCCCGCCGTGCTCA ACGGGCAGCACCCGGACACGACACCCCGGCCCTCAGCCACTCC	660
Sequenz_1	660	TACATGGACGCGGCGC AGTACCCGCTGCCGGAGGAGGTGGATGTGCTTTTAAACATCGAC	719
Sequenz_2	254	TACATGGACGCGGCGC AGTACCCGCTGCCGGAGGAGGTGGATGTGCTTTTAAACATCGAC	313
Sequenz_3	661	TACATGGACGCGGCGC AGTACCCGCTGCCGGAGGAGGTGGATGTGCTTTTAAACATCGAC	720
Sequenz_1	720	GGTCAAGGCAACCACG TCCCGCCCTACTACGGAAACTCGGTGAGGGCCACGGTGACAGAG	779
Sequenz_2	314	GGTCAAGGCAACCACG TCCCGCCCTACTACGGAAACTCGGTGAGGGCCACGGTGACAGAG	373
Sequenz_3	721	GGTCAAGGCAACCACG TCCCGCCCTACTACGGAAACTCGGTGAGGGCCACGGTGACAGAG	780
Sequenz_1	780	TACCTCCGACCCACC ACGGGAGCCAGGTGTGCCGCCGCTCTGCTTCATGGATCCCTA	839
Sequenz_2	374	TACCTCCGACCCACC ACGGGAGCCAGGTGTGCCGCCGCTCTGCTTCATGGATCCCTA	433
Sequenz_3	781	TACCTCCGACCCACC ACGGGAGCCAGGTGTGCCGCCGCTCTGCTTCATGGATCCCTA	840
Sequenz_1	840	CCCTGGCTGGACGGCG GCAAAGCCCTGGGCAGCCACCAACCGCCTCCCCCTGGAATCTC	899
Sequenz_2	434	CCCTGGCTGGACGGCG GCAAAGCCCTGGGCAGCCACCAACCGCCTCCCCCTGGAATCTC	493
Sequenz_3	841	CCCTGGCTGGACGGCG GCAAAGCCCTGGGCAGCCACCAACCGCCTCCCCCTGGAATCTC	900
Sequenz_1	900	AGCCCCCTTCTCAAGA CGTCCATCCACCACGGCTCCCCGGGGCCCCCTCTCCGTCTACCCC	959
Sequenz_2	494	AGCCCCCTTCTCAAGA CGTCCATCCACCACGGCTCCCCGGGGCCCCCTCTCCGTCTACCCC	553
Sequenz_3	901	AGCCCCCTTCTCAAGA CGTCCATCCACCACGGCTCCCCGGGGCCCCCTCTCCGTCTACCCC	960
Sequenz_1	960	CCGGCCTCGTCTCTCT CTTGTGCGGGGGGCCACGCCAGCCGACCTCTTACCTTCCCG	1019
Sequenz_2	554	CCGGCCTCGTCTCTCT CTTGTGCGGGGGGCCACGCCAGCCGACCTCTTACCTTCCCG	613
Sequenz_3	961	CCGGCCTCGTCTCTCT CTTGTGCGGGGGGCCACGCCAGCCGACCTCTTACCTTCCCG	1020
Sequenz_1	1020	CCACCCCGCCGAAGG ACGTCTCCCCGGACCCATCGCTGTCCACCCAGGCTCGGCCGGC	1079
Sequenz_2	614	CCACCCCGCCGAAGG ACGTCTCCCCGGACCCATCGCTGTCCACCCAGGCTCGGCCGGC	673
Sequenz_3	1021	CCACCCCGCCGAAGG ACGTCTCCCCGGACCCATCGCTGTCCACCCAGGCTCGGCCGGC	1080

Fig. 4 Cont.

Sequenz_1	1080	TCGGCCCGGCAGGACG AGAAAGAGTGCCTCAAGTACCAGGTGCCCTGCCCGACAGCATG	
Sequenz_2	674	TCGGCCCGGCAGGACG AGAAAGAGTGCCTCAAGTACCAGGTGCCCTGCCCGACAGCATG	1139
Sequenz_3	1081	TCGGCCCGGCAGGACG AGAAAGAGTGCCTCAAGTACCAGGTGCCCTGCCCGACAGCATG	733
			1140
Sequenz_1	1140	AAGCTGGAGTCGTCCC ACTCCCGTGGCAGCATGACCGCCCTGGGTGGAGCCTCCTCGTCG	
Sequenz_2	734	AAGCTGGAGTCGTCCC ACTCCCGTGGCAGCATGACCGCCCTGGGTGGAGCCTCCTCGTCG	1199
Sequenz_3	1141	AAGCTGGAGTCGTCCC ACTCCCGTGGCAGCATGACCGCCCTGGGTGGAGCCTCCTCGTCG	793
			1200
Sequenz_1	1200	ACCCACCACCCCATCA CCACCTACCCGCCCTACGTGCCCGAGTACAGCTCCGGACTCTTC	
Sequenz_2	794	ACCCACCACCCCATCA CCACCTACCCGCCCTACGTGCCCGAGTACAGCTCCGGACTCTTC	1259
Sequenz_3	1201	ACCCACCACCCCATCA CCACCTACCCGCCCTACGTGCCCGAGTACAGCTCCGGACTCTTC	853
			1260
Sequenz_1	1260	CCCCCAGCAGCCTGC TGGGCGGCTCCCCACCGGCTTCGGATGCAAGTCCAGGCCAAG	
Sequenz_2	854	CCCCCAGCAGCCTGC TGGGCGGCTCCCCACCGGCTTCGGATGCAAGTCCAGGCCAAG	1319
Sequenz_3	1261	CCCCCAGCAGCCTGC TGGGCGGCTCCCCACCGGCTTCGGATGCAAGTCCAGGCCAAG	913
			1320
Sequenz_1	1320	GCCCGGTCCAGCACAG AAGGCAGGGAGTGTGTGAACCTGTGGGGCAACCTCGACCCCACTG	
Sequenz_2	914	GCCCGGTCCAGCACAG ---GCAGGGAGTGTGTGAACCTGTGGGGCAACCTCGACCCCACTG	1379
Sequenz_3	1321	GCCCGGTCCAGCACAG AAGGCAGGGAGTGTGTGAACCTGTGGGGCAACCTCGACCCCACTG	970
			1380
Sequenz_1	1380	TGGCGGCGAGATGGCA CGGGACACTACCTGTGCAACGCCTGCGGGCTCTATCACAAAATG	
Sequenz_2	971	TGGCGGCGAGATGGCA CGGGACACTACCTGTGCAACGCCTGCGGGCTCTATCACAAAATG	1439
Sequenz_3	1381	TGGCGGCGAGATGGCA CGGGACACTACCTGTGCAACGCCTGCGGGCTCTATCACAAAATG	1030
			1440
Sequenz_1	1440	AACGGACAGAACCGGC CCCTCATTAAGCCCAAGCGAAGGCTGTCTGCAGCCAGGAGAGCA	
Sequenz_2	1031	AACGGACAGAACCGGC CCCTCATTAAGCCCAAGCGAAGGCTGTCTGCAGCCAGGAGAGCA	1499
Sequenz_3	1441	AACGGACAGAACCGGC CCCTCATTAAGCCCAAGCGAAGGCTGTCTGCAGCCAGGAGAGCA	1090
			1500
Sequenz_1	1500	GGGACGTCTGTGCGA ACTGTGACACCACCAACCACACTCTGGAGGAGGAATGCCAAT	
Sequenz_2	1091	GGGACGTCTGTGCGA ACTGTGACACCACCAACCACACTCTGGAGGAGGAATGCCAAT	1559
Sequenz_3	1501	GGGACGTCTGTGCGA ACTGTGACACCACCAACCACACTCTGGAGGAGGAATGCCAAT	1150
			1560
Sequenz_1	1560	GGGGACCCCTGTCTGCA ATGCCTGTGGGCTCTACTACAAGCTTCACAATATTAACAGACCC	
Sequenz_2	1151	GGGGACCCCTGTCTGCA ATGCCTGTGGGCTCTACTACAAGCTTCACAATATTAACAGACCC	1619
Sequenz_3	1561	GGGGACCCCTGTCTGCA ATGCCTGTGGGCTCTACTACAAGCTTCACAATATTAACAGACCC	1210
			1620
Sequenz_1	1620	CTGACTATGAAGAAGGAAGGCATCCAGACCAGAAACCGAAAAATGTCTAGCAAATCCAAA	
Sequenz_2	1211	CTGACTATGAAGAAGGAAGGCATCCAGACCAGAAACCGAAAAATGTCTAGCAAATCCAAA	1679
Sequenz_3	1621	CTGACTATGAAGAAGGAAGGCATCCAGACCAGAAACCGAAAAATGTCTAGCAAATCCAAA	1270
			1680
Sequenz_1	1680	AAGTGCAAAAAAGTGC ATGACTCACTGGAGGACTTCCCCAAGAACAGCTCGTTTAACCCG	
Sequenz_2	1271	AAGTGCAAAAAAGTGC ATGACTCACTGGAGGACTTCCCCAAGAACAGCTCGTTTAACCCG	1739
Sequenz_3	1681	AAGTGCAAAAAAGTGC ATGACTCACTGGAGGACTTCCCCAAGAACAGCTCGTTTAACCCG	1330
			1740
Sequenz_1	1740	GCCGCCCTCTCCAGAC ACATGTCCTCCTGAGCCACATCTCGCCCTTCAGCCACCCAGC	
Sequenz_2	1331	GCCGCCCTCTCCAGAC ACATGTCCTCCTGAGCCACATCTCGCCCTTCAGCCACCCAGC	1799
Sequenz_3	1741	GCCGCCCTCTCCAGAC ACATGTCCTCCTGAGCCACATCTCGCCCTTCAGCCACCCAGC	1390
			1800
Sequenz_1	1800	CACATGCTGACCACGC CCACGCCGATGCACCCGCCATCCAGCCTGTCTTTGGACCACAC	
Sequenz_2	1391	CACATGCTGACCACGC CCACGCCGATGCACCCGCCATCCAGCCTGTCTTTGGACCACAC	1859
Sequenz_3	1801	CACATGCTGACCACGC CCACGCCGATGCACCCGCCATCCAGCCTGTCTTTGGACCACAC	1450
			1860
Sequenz_1	1860	CACCCCTCCAGCATGG TCAACGCCATGGGTTAGAGCCCTGCTCGATGCTCACAGGGCCCC	
Sequenz_2	1451	CACCCCTCCAGCATGG TCAACGCCATGGGTTAGAGCCCTGCTCGATGCTCACAGGGCCCC	1919
Sequenz_3	1861	CACCCCTCCAGCATGG TCAACGCCATGGGTTAGAGCCCTGCTCGATGCTCACAGGGCCCC	1510
			1920
Sequenz_1	1920	CAGCGAGAGTCCCTGC AGTCCCTTTGCACTTGCAATTTTTCAGGAGCAGTATCATGAAGC	
Sequenz_2	1511	CAGCGAGAGTCCCTGC AGTCCCTTTGCACTTGCAATTTTTCAGGAGCAGTATCATGAAGC	1979
Sequenz_3	1921	CAGCGAGAGTCCCTGC AGTCCCTTTGCACTTGCAATTTTTCAGGAGCAGTATCATGAAGC	1570
			1980
Sequenz_1	1980	CTAAACGCGATGGATA TATGTTTTTGAAGGCAGAAAGCAAATATGTTTGCCACTTTGC	
Sequenz_2	1571	CTAAACGCGATGGATA TATGTTTTTGAAGGCAGAAAGCAAATATGTTTGCCACTTTGC	2039
Sequenz_3	1981	CTAAACGCGATGGATA TATGTTTTTGAAGGCAGAAAGCAAATATGTTTGCCACTTTGC	1630
			2040
Sequenz_1	2040	AAAGGAGCTCACTGTG GTGTCTGTGTTCACCACTGAATCTGGACCCCATCTGTGAATA	
Sequenz_2	1631	AAAGGAGCTCACTGTG GTGTCTGTGTTCACCACTGAATCTGGACCCCATCTGTGAATA	2099
Sequenz_3	2041	AAAGGAGCTCACTGTG GTGTCTGTGTTCACCACTGAATCTGGACCCCATCTGTGAATA	1690
			2100

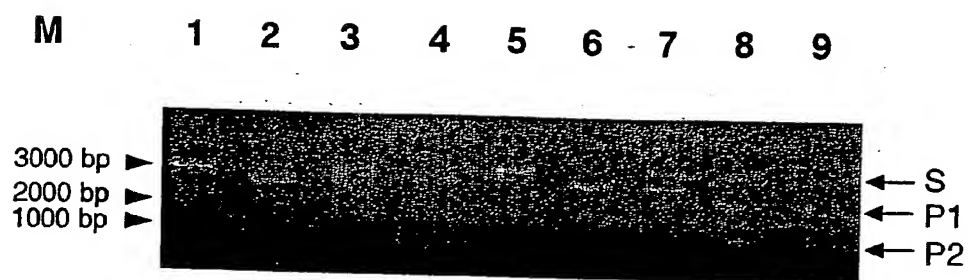
Fig. 4 Cont.

Sequenz_1	2100	AGCCATTCTGACTCATATCCCCCTATTTAACAGGGTCTCTAGTGCTGTGAAAAAAAAAA-T	2158
Sequenz_2	1691	AGCCATTCTGACTCATATCCCCCTATTTAACAGGGTCTCTAGTGCTGTGAAAAAAAAAAAT	1750
Sequenz_3	2101	AGCCATTCTGACTCATATCCCCCTATTTAACAGGGTCTCTAGTGCTGTGAAAAAAAAAAAT	2160
Sequenz_1	2159	CTGAACATTGCATAT AACTTATATTGTAAGAAATACTGTACAATGACTTTATTGCATCT	2218
Sequenz_2	1751	CTGAACATTGCATAT AACTTATATTGTAAGAAATACTGTACAATGACTTTATTGCATCT	1810
Sequenz_3	2161	CTGAACATTGCATAT AACTTATATTGTAAGAAATACTGTACAATGACTTTATTGCATCT	2220
Sequenz_1	2219	GGGTAGCTGTAAGGCA TGAAGGATGCCAAGAAGTTTAAGGAATATGGGAGAAATAGTGTG	2278
Sequenz_2	1811	GGGTAGCTGTAAGGCA TGAAGGATGCCAAGAAGTTTAAGGAATATGGGAGAAATAGTGTG	1870
Sequenz_3	2221	GGGTAGCTGTAAGGCA TGAAGGATGCCAAGAAGTTTAAGGAATATGGGAGAAATAGTGTG	2280
Sequenz_1	2279	GAAATTAAGAAGAAAC TAGGTCTGATATTCAAATGGACAAACTGCCAGTTTGTTCCTT	2338
Sequenz_2	1871	GAAATTAAGAAGAAAC TAGGTCTGATATTCAAATGGACAAACTGCCAGTTTGTTCCTT	1930
Sequenz_3	2281	GAAATTAAGAAGAAAC TAGGTCTGATATTCAAATGGACAAACTGCCAGTTTGTTCCTT	2340
Sequenz_1	2339	TCACTGGCCACAGTTG TTTGATGCATTAAAAGAAAAAAGAAAAAGAGAAAAAG	2398
Sequenz_2	1931	TCACTGGCCACAGTTG TTTGATGCATTAAAAGAAAAAAGAAAAAGAGAAAAAG	1990
Sequenz_3	2341	TCACTGGCCACAGTTG TTTGATGCATTAAAAGAAAAAAGAAAAAGAGAAAAAG	2399
Sequenz_1	2399	A-----	2399
Sequenz_2	1991	AAAAAAAAAGAAAAAA GTTGTAGGCGAATCATTTGTTCAAAGCTGTTGGCCCTCTGCAA	2050
Sequenz_3	2400	AAAAAAAAAGAAAAAA GTTGTAGGCGAATCATTTGTTCAAAGCTGTTGGCC-TCTGCAA	2458
Sequenz_1	****	-----	****
Sequenz_2	2051	GGAAATACCAGTTCTG GGCAATCAGTGTTACCGTTCACCAAGTTGCCATTGAGGGTTTCAG	2110
Sequenz_3	2459	GGAAATACCAGTTCTG GGCAATCAGTGTTACCGTTCACCAAGTTGCCATTGAGGGTTTCAG	2518
Sequenz_1	****	-----	****
Sequenz_2	2111	AGAGCCTTTTCTAGG CCTACATGCTTTGTGAACAAGTCCCTGTAATTGTTGTTGTATG	2170
Sequenz_3	2519	AGAGCCTTTTCTAGG CCTACATGCTTTGTGAACAAGTCCCTGTAATTGTTGTTGTATG	2578
Sequenz_1	****	-----	****
Sequenz_2	2171	TATAATTCAAAGCACC AAAATAAGAAAAGATGTAGATTATTTCATCATATTATACAGAC	2230
Sequenz_3	2579	TATAATTCAAAGCACC AAAATAAGAAAAGATGTAGATTATTTCATCATATTATACAGAC	2638
Sequenz_1	****	-----	****
Sequenz_2	2231	CGAACTGTTGTATAAA TTTATTACTGCTAGTCTTAAGAACTGCTTCTTTTCGTTTGT	2290
Sequenz_3	2639	CGAACTGTTGTATAAA TTTATTACTGCTAGTCTTAAGAACTGCTTCTTTTCGTTTGT	2698
Sequenz_1	****	-----	****
Sequenz_2	2291	GTTTCAATATTTTCCT TCTCTCTCAATTTTCGGTTGAATAAACTAGATTACATTCAAGTTG	2350
Sequenz_3	2699	GTTTCAATATTTTCCT TCTCTCTCAATTTTCGG-----	2731
Sequenz_1	****	-----	****
Sequenz_2	2351	GCAAAAAAAAAAAAA	2365
Sequenz_3	****	-----	****

GCGCGCGTCTTGATACTTTTCAGAAAGAATGCATTCCCTGTAAAAA  
 AAAAAAAAAATACTGAGAGAGGGAGAGAGAGAAGAAGAGAGAGACGG  
 AGGGAGAGCGAGACAGAGCGAGCAACGCAATCTGACCGAGCAGGTCTGAC  
 GCCGCCGCTCCTCCTCCTCTCTGCTCTTTCGCTACCCAGGTGACCCGAGG  
 AGGGAATCCGCTCCGAGCGGCTGAGGACCCCGGTGCAGAGGAGCCTGGC  
 TCGCAGAAATTGCAGAGTCGTCGCCCCCTTTTACAACCTGGTCCCGTTT  
 TTCTGCCATACCCAGTTTGGATTGTTTGTCTTCCCTTCTTCTCTTGC  
 TAAACGACCCCTCCAAGATAATTTTAAAAAACCTTCTCCTTTGCTCACC  
 TTTGCTTCCAGCCTTCCCATCCCCCACCAGCAAATCATTCAACGA  
 CCCCCGACCTCCGACGGCAGGAGCCCCCGACCTCCAGGCGGACCGCC  
 CTCCCTCCCCGCGCGCGGTTCGGGGCCCGGCGAGAGGGCGCGAGCACAG  
 CCGAGGCCATGGAGGTGACGGCGGACCAGCCGCGTGGGTGAGCCACCAC  
 CCCCCGCGGTGCTCAACGGGCGAGCACCAGGACACGACCCCGGGCCT  
 CAGCCACTCCTACATGGACGCGGCGCAGTACCCGCTGCCGAGGAGGTGG  
 ATGTGCTTTTAAACATCGACGGTCAAGGCAACCACGTCCCGCCCTACTAC  
 GGAAACTCGGTGAGGGCCACGGTGCAGAGGTACCTCCGACCCACCACGG  
 GAGCCAGGTGTGCGGCCCGCTCTGCTTCATGGATCCCTACCTGGCTGG  
 ACGGCGGCAAGCCCTGGGCGAGCCACCACCGCTCCCCCTGGAATCTC  
 AGCCCCCTTCTCAAGACGTCCATCCACCAGGCTCCCCGGGGCCCCCTCTC  
 CGTCTACCCCCCGGCTCGTCTCCTCCTTGTGCGGGGGGCCAGCCAGCC  
 CGCACCTCTTACCTTCCCGCCCCACCCGCGGAAGGACGTCTCCCCGAC  
 CCATCGCTGTCCACCCAGGCTCGGCGGCTCGGCCCGGAGGACGAGAA  
 AGAGTGCTCAAGTACCAGGTGCCCCCTGCCCCGACAGCATGAAGCTGGAGT  
 CGTCCCACTCCCGTGGCAGCATGACCGCCCTGGGTGGAGCCTCCTCGTCG  
 ACCACCAACCCATCACCACCTACCCGCCCTACGTGCCCCGAGTACAGCTC  
 CGGACTCTTCCCCCAGCAGCCTGCTGGGCGGCTCCCCACCGGCTTCG  
 GATGCAAGTCCAGGCCCAAGGCCCGGTCCAGCACAGAAGGCAGGGAGTGT  
 GTGAAGTGTGGGGCAACCTCGACCCCACTGTGGCGGCGAGATGGCACGGG  
 AACTACCTGTGCAACGCTGCGGGCTCTTACAAAAAAGAACGGACAGA  
 ACCGGCCCCCTCTTAAGCCCAAGCGAAGGCTCTGCGAGCCAGGAGAGCA  
 GGGACCTCTGCGGAACCTCAGACCACCACAACCACACTCTGGAGGAG  
 GATGCGCAATGGGGACCTCTGTCAGCCTGGGCTCTACTACAAGC  
 TTCACAAATAACAGACCCCTGACTGAAGAAGGAAGGCACAGACC  
 AGAAACCGAAAACTAGCAATCCAAAAAGTCAAAAAAGCAGTGA  
 CTCACGTGGAGACTTCCCAAGAACAGCTCTTAACCCGGCGGCCCTCT  
 CCAGACACCTCTCCTGAGCCACCTCGCCCTCAGCCACCCACAGC  
 CACGCTGACCACGCCCCAGCCCGCACCCGCTCCAGCCTCCTT  
 TGGACCACACCCCTCCAGCTGACACCCGCTGGCTAGAGCCCTG  
 CTCGAGCTCACAGGGCCCCCAGCGAGACCCCTGCACCTCTTCGACT  
 TGCAATTTTGCAGGAGCACTCAAGGCCTAAACGCGTGGAGATTTT  
 TTTTGAAGGCAGAAAGCAAAATGCTTGCCACTTTGCAAGGAGCTC  
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Fig. 4 A



**Fig. 5**

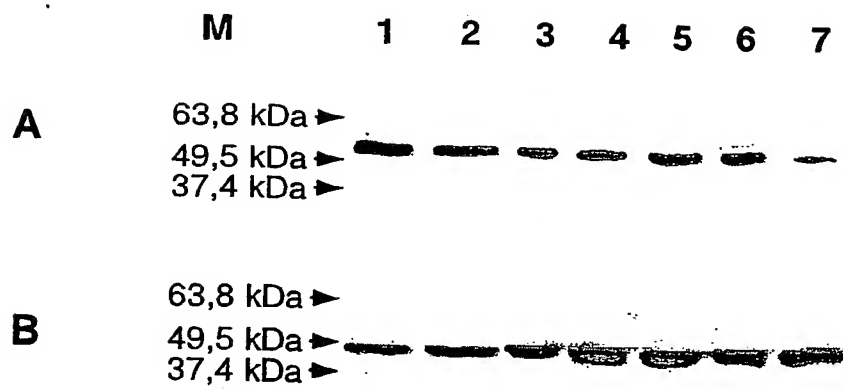
**Fig. 6**

Fig. 7

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td2	GGGCTCTGAggctagctacaacgaGCCTGGCTT
td3	GGGACCCCAggctagctacaacgaCGGAGCCCG
td4	GGTGGGGGAggctagctacaacgaCCCACCGGA
td5	GGCGGGGGAggctagctacaacgaCCGAGGGCC
td6	GGGCTGGGAggctagctacaacgaGGGCAGGGA
td7	CGTCGAGGAggctagctacaacgaCCGCCCCTC
td8	GGGCTGGCAGgctagctacaacgaCTTCCCGTA
td9	CGATGCCCCAggctagctacaacgaCCGGGGCGG
td10	GCTCCACGAggctagctacaacgaGCCCATCCG
td11	CCGGCTCCAggctagctacaacgaGATGCCCAT
td12	TCTCCGCAAggctagctacaacgaCCGGCTCCA
td13	CCGTCAGCAggctagctacaacgaGTCTCCGCA
td14	TCCCCGGCAGgctagctacaacgaCGGCTCGGT
td15	CCCCCGCGAggctagctacaacgaGCTCGTCCG
td16	GTAGGGAGAggctagctacaacgaCCCAGGCTG
td17	GGGCGGGCAGgctagctacaacgaCAAGGCGCC
td18	CGGGAAGGAggctagctacaacgaTCGCCCCGG
td19	TAGTCCTCAggctagctacaacgaGCGGCCCCG
td20	TCCCCGACAggctagctacaacgaCTCCAGTCC
td21	TTTCCCCGAggctagctacaacgaACCTCCAGT
td22	TGAGCGCGAggctagctacaacgaCCTCAGTTT
td23	GGACCACAAGgctagctacaacgaAGGTGGTTG
td24	CTTGGAACAggctagctacaacgaAACAGGTGG
td25	AAACTTGGAggctagctacaacgaCACAACAGG
td26	CTGATTAAAggctagctacaacgaTTGGACCAC
td27	TGGTGCTGAggctagctacaacgaTAACTTGG
td28	TGATGATCAggctagctacaacgaCTCTGTCTG
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td31	ATGGGAACAaggctagctacaacgaCCGCCGTCC
td32	GAATGGGAAggctagctacaacgaATCCGCCGT
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td37	CCACAAACAggctagctacaacgaCCTGTAGTG
td38	GTCCACAAAggctagctacaacgaATCCTGTAG
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td42	GCTGGTCCAaggctagctacaacgaCAAGACCAC
td43	GCTCTGGTAggctagctacaacgaCGCCAGTGG
td44	CTGCACCCAggctagctacaacgaTTGCCGCTC
td45	CACACTGCAggctagctacaacgaCCACTTGCC
td46	CTTTCCACAggctagctacaacgaTGCACCCAC
td47	GCCTTTCCAaggctagctacaacgaACTGCACCC
td48	TTCTTGGCAGgctagctacaacgaGCTGCCCTC

Fig. 7 Cont.

Name	DNAzyme Sequenz
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TD51	CCTGGCGCaggctagctacaacgaCCAGTGCGC
TD52	CAAATGAAaggctagctacaacgaTTCCTGGCG
TD53	TTTCCCAAaggctagctacaacgaGAAACTTCC
TD54	ATTGTTGGAggctagctacaacgaGCCCCCTTG
TD55	TGGGTCACAggctagctacaacgaTGTTGGACG
TD56	TCTGGGTCaggctagctacaacgaATTGTTGGA
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TD58	GGAGCACAaggctagctacaacgaCATCTGGGT
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TD60	ATGGAGGGaggctagctacaacgaTGGAGCACA
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TD74	TATTATCAaggctagctacaacgaTTTCAGCTG
TD75	GGGTTATTAggctagctacaacgaCAATTTTCA
TD76	AAGGGGTTAggctagctacaacgaTATCAATTT
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## Multiple Sequenz Alignments T-bet

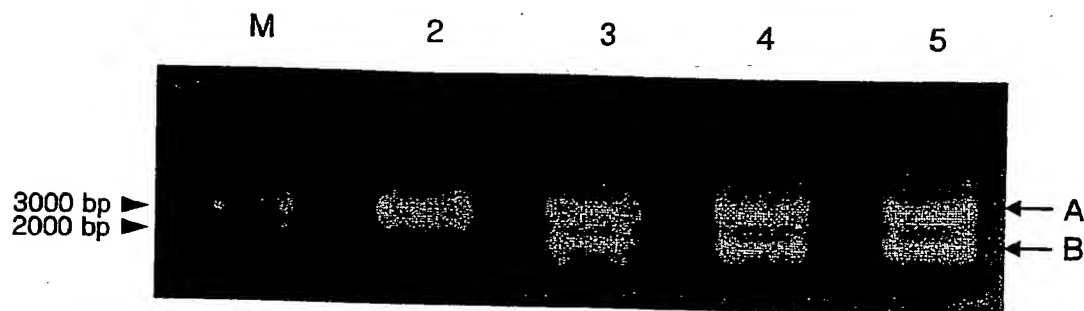
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Seq_2	61	CCAGGCGTCAGAGCCCCGGGCTCCGGTGGGGTCCCCACCCGGCCCTCGGGTCCCCCGCCC	120
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Seq_2	421	CTTCCTTGGAGCCTACGCCCTACCCGCGCGACCCAGGCGGCGCGCTTCCCCGGCGCGGG	480
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Seq_2	721	GTCATTTACTGTGGCCGGGCTGGAGCCCCACAGCCACTACAGGATGTTTGTGGACGTGGT	780
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Seq_2	1321	CCCCGACCTTCTGGCCAGGCGAAGGATGTGGTTCGCCAGGCTTACTGGCTGGGGGCCCC	1380
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Seq_1	1561	TATGCGGACTCTGCCCATGGAACCCGGCCCTGGAGGCTCAGAGGGACGGGGACCAGAGGA			1620
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Fig. 8A

**Fig. 9**



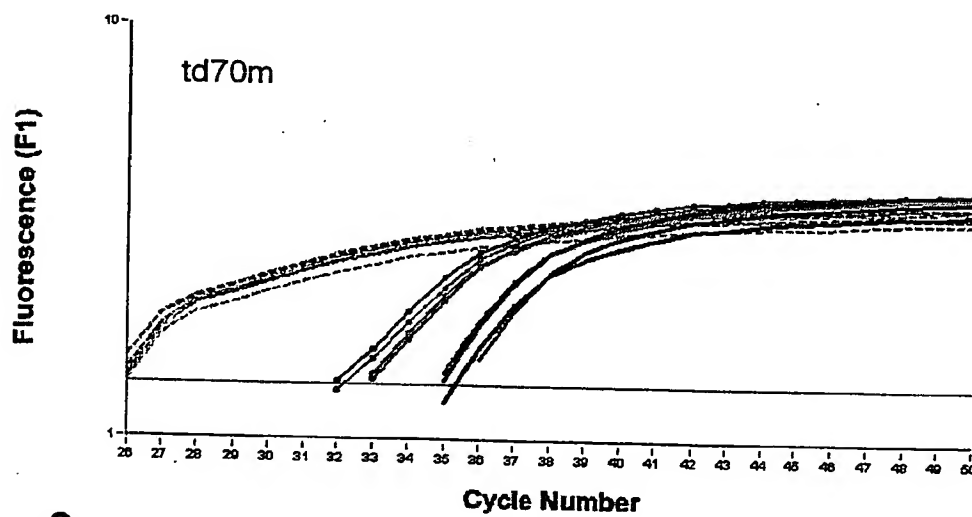
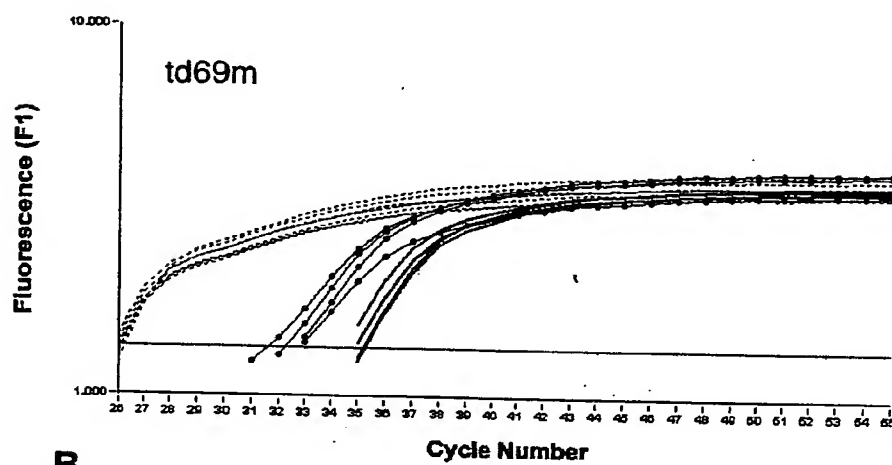
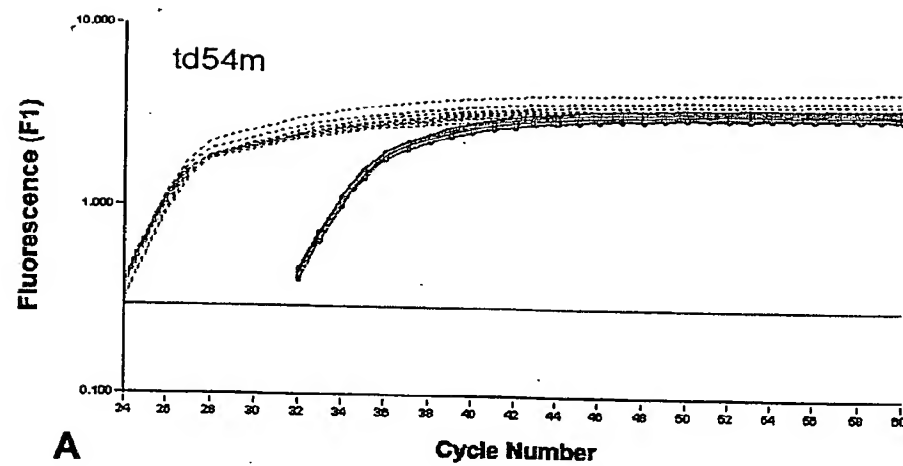
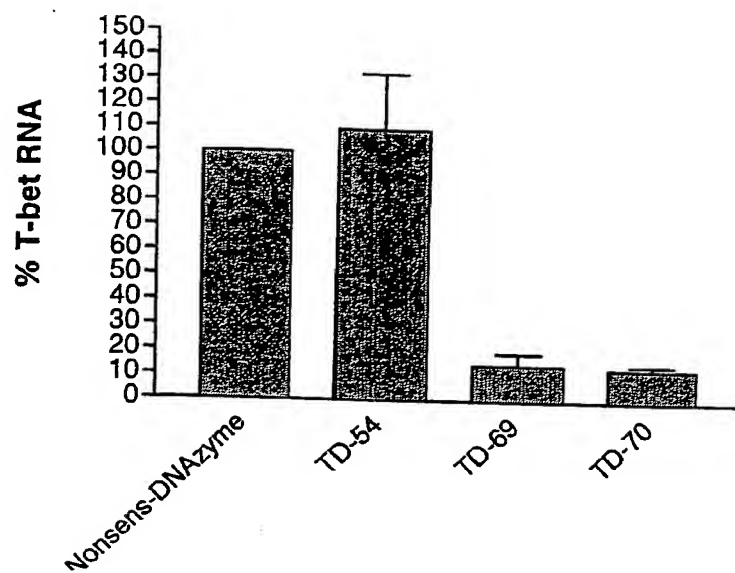


Fig. 10

**Fig. 11**